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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,723	03/21/2006	Michael John V. Moreton	6546500006USPX	3400

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EXAMINER

MEHRPOUR, NAGHMEH

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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09/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/572,723	Applicant(s) MORETON, MICHAEL JOHN V.	
	Examiner MELODY MEHRPOUR	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement filed reference listed in the information Disclosure Submitted on 11/06/06 have been considered by the examiner (see attached PTO-1449

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1-6, 8-10**, are rejected under 35 U.S.C. 102(e) as being anticipated by Terry (US publication 2005/0147075 A1).

Regarding claim 1, Terry teaches a method of handling data packets in a Wireless Local Area Network (WLAN), comprising:

(a) contending for control of a medium over which data is to be transmitted, by a plurality of nodes in the network (0042);

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- (b) when control of the medium has been established by a first node in the network, transmitting a first data packet from that first node, which has control of the medium, to a second node in the network (0044, 0045);
- (c) receiving, at that second node, the transmitted data packet (0044);
- (d) generating, at that second node, a combined data/acknowledgement packet which contains both an acknowledgement of receipt of the said first data packet by the said second node and also a second data packet intended for delivery to the said first node from the said second node (0047); and
- (e) transmitting the said combined data/acknowledgement packet from the said second node to the said first node (0044, 0045, 0046, 0047).

Regarding claim 2, Terry teaches a method of claim 1, further comprising:

- (f) receiving, at the first node, the said combined data/acknowledgement packet (0047);
- (g) generating, at that first node, a further combined data/acknowledgement packet which contains both an acknowledgement of receipt of the said second data packet by the said first node and a third data packet intended for delivery to the said second node from the said first node (0044, 0045, 0047); and
- (h) transmitting the further combined data/acknowledgement packet from the said first node to the said second node (0044, 0046, 0047).

Regarding claim 3, Terry teaches a method of claim 2, further comprising:

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(i) receiving at the second node, the said further combined data/acknowledgement packet (0047);

(j) generating, at that second node, a still further combined data/acknowledgement packet which contains both an acknowledgement of receipt of the said third data packet by the said second node and a fourth data packet intended for delivery to the said first node from the said second node (0047); and

(k) transmitting the still further combined data/acknowledgement packet from the said second node to the said first node (0047).

Regarding claim 4, Terry inherently teaches a method of claim 3, further comprising: iteratively repeating steps (f) to (h) for each of the fifth, sixth, seventh, . . . n.sup.th data packets (0047, 0048, 0049, 0050).

Regarding claim 5, Terry teaches a method of claim 4, wherein the iterative repetition terminates when either a maximum time of medium control by the first node is reached, or when there are no further data packets to be transmitted (0007, 0043, 0054).

Regarding claim 6, Terry teaches a method of claim 1, wherein the step (a) of contending for control of the medium is carried out in accordance with carrier sense multiple access with collision avoidance (CSMA/CA) (0054).

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Regarding claim 8, Terry teaches a method of claim 2, further comprising, following receipt of the, or the further, data/acknowledgement packet, the step of extracting, from that data/acknowledgement packet, the data contained therein, and extracting the acknowledgement therefrom as well (0047, 0077).

Regarding claim 9, Terry teaches a method of claim 8, wherein the step of extracting are carried out when it is determined by the receiving node either that the received packet is longer than an acknowledgement of receipt alone (0047), or that the received packet has a header which indicates that both data and acknowledgement are contained therein.

Regarding claim 10, Terry teaches a method of any claim 1, wherein the step of generating a combined data/acknowledgement packet comprises either concatenating an IEEE 802.11 ACK frame with a data payload, or comprises altering a header to an IEEE 802.11 data frame to indicate that the frame carries both a data payload and an acknowledgement of receipt (0004).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claim 7**, is rejected under 35 U.S.C. 103(a) as being unpatentable over Terry (US publication 2005/0147075 A1) in view of Tao (US Publication 2006/0056443 A1).

Regarding claim 7, Terry fails to teach a method of claim 6, wherein the step (a) of contention for control of the medium is in accordance with Enhanced Distributed Coordination Function Channel Access (EDCA). However, Tao teaches a method of claim 6, wherein the step (a) of contention for control of the medium is in accordance with Enhanced Distributed Coordination Function Channel Access (EDCA) (0092).

Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Tao with Terry, in order to aggregate MAC service data units to achieves a substantial improvement in throughput without increasing the complexity of the protocol

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Grandhi et al. (US Publication 2006/0050742 A1) disclose method and system for controlling access to a wireless communication medium

7. **Any responses to this action should be mailed to:**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naghmeh Mehrpour whose telephone number is 571-272-7913.

The examiner can normally be reached on 8:00- 6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached (571) 272-7023.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Naghmeh Mehrpour/

Primary Examiner, Art Unit 2617

September 22 2008